

STATED MEETING, OCTOBER 12, 1841.

VICE PRESIDENT MORTON in the Chair.

DONATIONS TO CABINET.

Skull of *Chelonura Temminckii* (Troost), from the Mississippi river.—Deposited by Dr. Morton on behalf of Dr. Holbrook.

Corvus pica, English Jay; *Corvus garrulus*, common Jay; *Perdix cinerea*, female; and *Sciurus vulgaris*, from France.
—Presented by Dr. Colin Arrott, through Dr. Watson.

Purpura persica.—From Mr. Pierpoint.

Caracolla Hydiana; two species of *Bulimus*, undescribed? two specimens each, from the Sandwich Islands.—Presented by Dr. J. C. Jay.

Unio lanceolatus, two specimens; James river, at Buchanan, Virginia.—From Mr. S. S. Haldeman.

Unio purpureus; two specimens, and *Limnea catascopium*. Providence, R. I.—Presented by Dr. Blanding.

Turbinella ceramica, and an *Ancillaria*.—Presented by Dr. S. G. Morton.

Unio retusus, *U. clavus*, *U. circulus*, *U. lens*, *U. donaciformis*, *U. solidus*? *U. pileus*, *U. personatus*, *U. ridibundus*, *U. sulcatus*, *U. undulatus*, *U. parvus*, *U. abruptus*, *U. lapillus*, *U. Æsopus*, *U. foliatus*, *U. fragosus*; each species illustrated by a series to show the male and female forms, with the different ages and varieties. *Helix multilincata*, *H. clausa*, *H. Pennsylvanica*, *H. tridentata*, *H. appressa*, *H. concava*, *H. thyroidus*, *H. elevata*, *H. ligera*, *H. palliata*, *H. monodon*; from three to five specimens each. From the

vicinity of Cincinnati, Ohio.—Presented by Mr. J. G. Anthony, of Cincinnati, through Mr. J. S. Phillips.

The copperplates belonging to Conrad's Marine Shells, numbers 1 to 8 inclusive, and 11 and 12, being all the coppers used in that work, were presented by T. A. Conrad, through J. S. Phillips: Mr. Conrad reserving to himself the privilege of taking such impressions from them as he may hereafter require.

DONATIONS TO LIBRARY.

Katalog von Petrefacten. Sammlungen, nach Brown's *Lethea Geognostica*. 8vo. Heidelberg, 1841.—From Francis Markoe, Jr., Esq.

Catalog fur geognostisch-petrefactologische Sammlungen. 8vo. Heidelberg, 1841.—From Francis Markoe, Jr. Esq.

Transactions of the Zoological Society of London. 4to. vol. 2, Part 5. London, 1841.—From the Society.

Reports of the Council and Auditors of the Zoological Society of London. 8vo. London, 1841.—From the Society.

A new Pocket Map, Geological and Topographical of Nova Scotia.—From Francis Alger, Esq.

WRITTEN COMMUNICATIONS.—A letter was then read from Thomas M. Brewer, Esq. of Boston, acknowledging the announcement of his election as a corresponding member.

Dr. Morton read the following communication on a section of the Geology of the United States.

Description of several new species of Fossil shells from the cretaceous deposits of the United States.

First series,—from Upper Missouri.

It is now nearly forty years since Messrs. Lewis and Clark, in their expedition to the Columbia river, procured a few fossils at the great bend of the Missouri river, (Lat. 43° 40' N.) which I identified as belonging to cretaceous deposits of the same age as the Marl or Ferruginous sand of New Jersey, Delaware, Alabama, &c. Sub-

sequently Mr. Nuttall brought some additional species, but for the most part in fragments. Very lately, however, Mr. J. N. Nicollet having personally visited that remote region, obtained a series of fossils in far greater perfection and variety than any previous traveller. It is proposed on the present occasion to indicate the species, and accompany them with a few brief remarks.

GENUS AMMONITES.

1. *A. mandanensis*.—Shell compressed, with scarcely two volutions, the inner being received into a superficial fossa of the outer whorl. Internal and external margins armed with pointed tubercles, between which are delicate, gently curved costæ, mostly bifurcated about one-third of the distance from the outer tubercles, beyond which they extend across the periphery of the shell; the latter gently plano-convex. Umbilicus imperforate?

The diameter of the largest specimen has been about three inches; of the smallest I have seen, an inch and a half. In the smaller specimens the internal marginal tubercles are very indistinct; but in other respects this species appears to be but little modified by age.

2. *A. abyssinus*.—Whorls convex, making two nearly complete volutions, with strong, gently curved, bifurcated ribs, slightly tuberculated at the margin of the dorsal periphery, which they cross to meet the costæ of the opposite side. Umbilicus perforate. Diameter from three-fourths of an inch to one inch.

This species is strikingly different from the *A. mandanensis*, in the greater size of its costæ, its perforate umbilicus, and its convex dorsal periphery.

3. *A. borealis*.—Shell convex, rapidly enlarging towards the mouth, with at least two volutions, one received deeply into the other; costæ delicate, gently curved, and bifurcate towards the convex dorsal periphery, which they cross in arched lines between numerous minute tubercles.

Some years since I saw several specimens of *Ammonites* which were obtained by Judge Bry, in the township of Wachita, in Lou-

isiana. I have elsewhere (Synop. p. 24,) considered them as indications of cretaceous deposits ; and my recollection induces me to believe that their characters correspond either to *A. Abyssinus* or *A. borealis*.

Besides the preceding fossils from upper Missouri, Mr. Niccollet obtained the following species from the same interesting locality.

Ammonites Conradi (nobis,) Synop. Pl. xvi. fig. 1, 2, 3. Large and beautifully preserved specimens.

Ammonites placenta, (Dekay,) Synop. pl. 2, fig 1. This species is found from comparatively small dimensions to a gigantic size, probably not less than two or three feet in diameter.

Inoceramus Barabine (nobis,) Synop. Pl. xvii. fig. 3, and Pl. xiii. fig. 11. This shell has hitherto been found only in Greene county, Alabama, but appears to be abundant in the Mandan country, often compressed and broken, but readily identified.

Baculites compressus, (Say,) Synop. Pl. ix., fig. 1. This species so nearly resembles *B. ovatus* of the same naturalist, from the marls of New Jersey, that I am almost disposed to consider them identical. The species in question is found of gigantic dimensions, for example, more than a foot in length, and three or four inches in diameter.

Belemnites Americanus, (nobis,) Synop. Pl. 1, fig. 1, 2, 3.

Hence it appears that among the small number of species noticed on this occasion, at least four are found in deposits of the same age on this side of the Mississippi, thus identifying the cretaceous strata over an immense geographical area, which commences in New Jersey, and perhaps at Martha's Vineyard, is traced in all the Atlantic States to Georgia, thence through Alabama and Mississippi, across the Mississippi to Louisiana, and Arkansas, where it is seen on the plains of the Kiamasha. From this point until we approach the Great Bend of the Missouri river, in the Mandan country, it has not yet been traced ; but in the last named region, about 1500 miles above the mouth of the Missouri, it becomes again conspicuous as

already stated, abounding in characteristic organic remains of great beauty. The extent of this locality is not yet known; it is probable that it occupies a very large area, and is destined to become one of the most interesting and prolific fossil localities that has tempted the enterprise of geologists. These fossils are remarkable alike for their admirable preservation and their great beauty; the latter being much heightened by the presence of an opalescent nacre which has been rarely noticed in the other cretaceous beds of this country.

Second series,—from the lower cretaceous beds, or ferruginous sand of New Jersey and Delaware.

AMMONCERATITES.

A. Conradi.—Shell with an entire whorl, somewhat compressed, with numerous, distinct, slightly curved costæ, which diminish and become almost extinct at the internal peripheral margin: external periphery sub-angular, and undulated by the transit of the costæ.

This specimen is a cast in a dark grey ferruginous sand, charged with minute scales of mica. The terminal end is nearly complete, and is almost on a line with what appears to have been the mouth of the shell, and the two approach within a quarter of an inch of each other. Diameter $2\frac{1}{2}$ inches.

This is the first example of an Ammonceratite found in the United States. It was obtained from a marl pit near Arneytown, New Jersey, by Mr. Conrad, in whose name I gladly introduce it to public notice.

This genus is characteristic of the European chalk, having been found both in England and France, in deposits of that age; thus affording another evidence of the analogy between the cretaceous deposits of the old world with the marl strata of the new.

HAMITES.

H. annulifer.—Shell small, cylindrical, equal; the external two-

thirds convex, the internal third concave, with numerous delicate, distinct and closely approximated rings, which encircle the whole shell.

One end of this remarkable species has the characteristic curve and septa of the Hamites. The concave surface looks as if designed to receive the cylinder of the opposite side. Length nearly one inch.

Found by Mr. Conrad in the ferruginous sand at the Deep-cut of the Chesapeake and Delaware canal.

STATED MEETING, OCTOBER 19, 1841.

VICE PRESIDENT MORTON in the Chair.

DONATIONS TO MUSEUM.

Eggs of sixteen species of birds found in Michigan, July, 1841, by Dr. George C. Leib, and by him presented to the Society, viz.:

Anas discors, 3.
—— *boschas*, 14.
Fulica Americana, 16.
Galinula galeata, 10.
Podiceps Carolinensis, 6.
Ardea exilis, 12.
—— *lentiginosa*, 9.
Turdus felivox, 5.
—— *migratorius*, 8.
—— *rufus*, 1.
Icterus phæniceus, 4.
Coccyzus erythrophthalmus, 15.
Quiscalus versicolor, 11.
Sturnus ludovicianus, 2.
Ortyx virginianus, 7.
Muscicapa tyrannus, 13.